NPDES PERMIT NO. TX0052809
STATEMENT OF BASIS

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

I. APPLICANT

Alabama-Coushatta Tribe of Texas WWTP
571 State Park Road 56
Livingston, TX 77351

II. ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

III. PREPARED BY

Laurence E. Giglio
Environmental Engineer
NPDES Permits Branch (6WQ-PP)
Water Quality Protection Division
VOICE: 214-665-6639
FAX: 214-665-2191
EMAIL: giglio.larry@epa.gov

IV. DATE PREPARED

August 28, 2006

V. PERMIT ACTION

Renewal of a permit issued September 13, 2002, with an effective date of October 1, 2002 and an expiration date of August 1, 2006.

Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed in Title 40, Code of Federal Regulations, revised as of August 21, 2006.

VI. PROPOSED CHANGES FROM PREVIOUS PERMIT

It is proposed that the current permit be reissued for a 5-year term.

There are no changes from the current permit issued September 13, 2002, with an effective date of October 1, 2002 and an expiration date of August 1, 2006.

VII. DISCHARGE LOCATION

As described in the application, the facility is located adjacent to and west of Park Road 56 in Polk County, Texas. The facility is on Alabama-Coushatta Tribal land. The discharge is into waters that are on Tribal land, and the closest downstream State waters are approximately 1.6 miles downstream from the point of discharge. The discharge from Outfall 001 is located at:

Outfall 001 - Latitude 30° 42' 30" North, Longitude 94° 40' 45" West

VIII. APPLICANT ACTIVITY

Under the Standard Industrial Classification (SIC) Code 4952, the applicant operates a publicly owned wastewater treatment plant. The operation described in the application consists of an extended aeration plant using two aeration vessels, an aerated sludge holding tank, a clarifier and a chlorine contact chamber. Design flow is unchanged from the previous permit at 0.115 MGD. Sludge is removed by Longhorn Septic Service, Livingston, Texas, Permit #04479 N/TCEQ, when needed.

IX. RECEIVING STREAM STANDARDS

The Tribe does not have EPA approved WQS. The discharge does have a reasonable potential to impact the State of Texas surface waters downstream from the point of discharge. As such, the effects of the downstream State of Texas WQS must be considered in the permit. The general criteria and numerical criteria which make up the stream standards are provided in the Texas Administrative Code (TAC), 30 TAC Sections 307.1 - §307.10, effective August 17, 2000.

The treated effluent is discharged to Tombigbee Creek below Tombigbee Lake thence to Bear Creek, thence to Big Sandy Creek, thence to Village Creek in Segment 0608 of the Neches River Basin. Tombigbee Creek below Tombigbee Lake has no significant aquatic uses. The designated uses for Segment 0608 are high aquatic life, contact recreation and public water supply.

X. EFFLUENT CHARACTERISTICS

The facility submitted information in its application that describes the nature of the permitted discharge. The pollutants arsenic, lead, selenium, mercury, beryllium, boron, chromium, cobalt, copper, nickel, vanadium, zinc, cadmium, silver, aluminum, phenolics, PCB’s, and all the

pesticides were all below MQL's. Data that were greater than the established MQL's and other salient data are included below:

Pollutant	Avg Concentration mg/l, unless noted
pH	7.12 – 7.3 su's
Temperature, ºF	49 – 78
Biochemical Oxygen Demand (5-day) (BOD_5)	2
Total Suspended Solids (TSS)	32.7
Fecal Coliform Bacteria (FCB)	2.7 cfu/100 ml
Ammonia	0.2
Total Residual Chlorine (TRC)	2.1
Dissolved Oxygen (DO)	7.13
Total Kjeldahl Nitrogen (TKN)	46.45
Nitrate plus Nitrite Nitrogen	42.92
Oil and Grease (O&G)	0.57
Phosphorus, total	1.43
Total Dissolved Solids (TDS)	453

XI. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

The proposed effluent limitations for those pollutants proposed to be limited are based on regulations promulgated at [40 CFR 122.44]. The draft permit limits are based on either technology-based effluent limits pursuant to [40 CFR 122.44(a)], on best professional judgment (BPJ) in the absence of guidelines, and/or requirements pursuant to [40 CFR 122.44(d)], whichever are more stringent.

A. REASON FOR PERMIT ISSUANCE

It is proposed that the permit be issued for a 5-year term following regulations promulgated at [40 CFR 122.46(a)].

Comment [COMMENT1]: If the permit is for a 5-year term, citation should be 40CFR§122.46(a)

The initial permit application was received on July 19, 2006, and was determined to be administratively complete July 21, 2006.

B. OPERATION AND REPORTING

The permittee must submit monthly discharge monitoring reports (DMR's) quarterly, beginning on the effective date of the permit, lasting through the expiration date of the permit, to report on all limitations and monitoring requirements in the permit.

The applicant is required to operate the treatment facility at maximum efficiency at all times; to monitor the facility's discharge on a regular basis; and report the results quarterly. The monitoring results will be available to the public.

C. TECHNOLOGY BASED EFFLUENT LIMITATIONS/CONDITIONS

Regulations promulgated at [40 CFR 122.44(a)] require technology-based effluent limitations to be placed in NPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgment) in the absence of guidelines, or on a combination of the two.

Secondary treatment, established at [40 CFR 133.102(a)] and [40 CFR 133.102(b)] are 30 mg/l for the 30-day average and 45 mg/l for the 7-day average for BOD_5.

Final Effluent Limits 0.115 MGD design flow

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		
	lbs/Day	mg/l (unless noted)	
Parameter	30-Day Avg.	30-Day Avg.	7-Day Avg.
Flow	N/A	Measure MGD	Measure MGD
BOD_5	29	30	45
TSS	29	30	45
PH	N/A	6.0 – 9.0 standard units	

TSS/BOD_5 loading (lbs/day) = 30 mg/l * 8.345 lbs/gal * 0.115 MGD = 29 lbs/day

D. SOLID WASTE PRACTICES

The permittee shall use only those sewage sludge disposal or reuse practices that comply with the federal regulations established in [40 CFR Part 503] "Standards for the Use or Disposal of Sewage Sludge." The specific requirements in the permit apply as a result of the design flow of the facility, the type of waste discharged to the collection system, and the sewage sludge disposal or reuse practice utilized by the treatment works.

Sludge testing information will be retained by the permittee for a minimum of five (5) years as required in the record keeping requirements section of Part IV, in accordance with NPDES Permit No. TX0052809.

E. WATER QUALITY BASED LIMITATIONS

1. General Comments

Effluent limitations and/or conditions established in the draft permit are in compliance with State water quality standards and the applicable water quality management plan.

2. Segment Specific Water Quality-Based Limits

The Clean Water Act in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at [40 CFR 122.44 (d)] state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criterion, the permit must contain an effluent limit for that

pollutant. The pollutant concentrations contained in the permit application were measured against State numeric water quality standards, and these are shown in the attached spreadsheet.

Regulations promulgated at [40 CFR 122.44(d)] require limits in addition to or more stringent than effluent limitation guidelines (technology based).

Segment specific standards for Segment 0608 require pH to be between 6.0 – 8.5 su's and E. coli bacteria of 126/200 fcu/100 ml. Regulations promulgated at 30 TAC Section 309.3(g)(2) establish chlorination as an alternative means to demonstrate compliance with bacteria disinfection. Those regulations establish a minimum TRC of 1.0 mg/l and a maximum of 4.0 mg/l after a minimum detention time of 20-minutes based on peak flow. Those are identical to the current permit limitations. The pollutant pH segment specific limitations of 6.0 – 8.5 su's are instream values. The dilution offered by the receiving waters will allow the technology based limitations above, 6-9 su's, to meet applicable WQS. The permit shall have pH limited to 6-9 su's, which is identical to the current permit.

Regulations at 30 TAC Section 309.1 (b), "Domestic Wastewater Effluent Limitations and Plant Siting," Secondary Treatment, specifies more restrictive limitations for BOD and TSS. Table 1 of TAC Section 309.4 lists that for domestic treatment plants using secondary treatment, limits for both BOD and TSS shall be 20 mg/l for the 30-day average, 30 mg/l for the 7-day average and a daily maximum of 45 mg/l. These limitations are more restrictive than those shown above in the technology-based section. These limits are identical to the current permit, and shall be maintained in the draft permit.

TSS/BOD_5 loading (lbs/day) = 20 mg/l * 8.345 lbs/gal * 0.115 MGD = 19 lbs/day

The initial receiving water, Tombigbee Creek, is an unclassified receiving water. It must maintain a minimum DO of 2.0 mg/l. Village Creek, the first classified receiving water, has a minimum DO requirement of 5.0 mg/l. The Water Quality Assessment section at TCEQ verified using a desktop DO model that the BOD limits proposed above are sufficient to meet those requirements. The previous permit had a DO limitation 0f 2.0 mg/l, and this limit will be maintained in the draft permit.

The design flow of the facility is 0.115 MGD. Using procedures from 30 TAC Section 317.2 (b)(3), and the previous permit, the maximum peak flow for any 2-hour period shall be limited to 16,770 gallons per hour.

4. Toxics Evaluation

The Clean Water Act in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at [40 CFR 122.44 (d)] state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criterion, the permit must contain an effluent limit for that pollutant.

All POTW's are required to fill out appropriate sections of the Form 2A, to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to Publicly Owned Treatment Works (POTW's) and to facilities that are similar to POTW's, but which do not meet the regulatory definition of "publicly owned treatment works" (like private domestics, or similar facilities on Federal property). The forms were designed and promulgated to "make it easier for permit applicants to provide the necessary information with their applications and minimize the need for additional follow-up requests from permitting authorities," per the summary statement in the preamble to the Rule. These forms became effective December 1, 1999, after publication of the final rule on August 4, 1999, Volume 64, Number 149, pages 42433 through 42527 of the Federal Register.

The amount of information required for minor facilities was limited to specific sections of these forms, because they are unlikely to discharge toxic pollutants in amounts that would impact state water quality standards. Supporting information for this decision was published as "Evaluation of the Presence of Priority Pollutants in the Discharges of Minor POTW's," June 1996, and was sent to all state NPDES coordinators by EPA Headquarters. In this study, EPA collected and evaluated data on the types and quantities of toxic pollutants discharged by minor POTW's of varying sizes from less than 0.1 MGD to just under 1 MGD. The Study consisted of a query of the EPA Permit Compliance System (PCS) database from 1990 to present, an evaluation of minor POTW data provided by the State agencies, and on-site monitoring for selected toxics at 86 minor facilities across the nation.

Of the facilities sampled in the study, which discharged one of the priority pollutants screened, all tested near or lower than the most stringent national water quality criterion. The most commonly detected pollutants were total phenolics (at 100% of facilities), zinc (at 92% of facilities), copper (at 64% of facilities), and lead (at 32.6% of facilities), with other pollutants detected at less than 10% of the study facilities, and with beryllium, mercury, and cyanide not detected at any of the facilities. Comparison of the effluent pollutant concentration data directly to water quality criteria did not take into account dilution, and did not consider other site specific factors such as hardness, temperature, turbidity, salinity, etc. This was considered an overly conservative approach by the study, but used as such to illustrate the extremely low reasonable probability these facilities had to violate state water quality standards. Due to the information supplied in the application, the Agency has determined that no reasonable potential exists for this discharge to violate applicable State and/or Tribal WQS, beyond pH and E. coli bacteria.

5. Post Third Round Policy and Strategy

Section 101 of the Clean Water Act (CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited..." To insure that the CWA's prohibitions on toxic discharges are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants 49 FR 9016-9019, March 9, 1984." In support of the national policy, Region 6 adopted the "Policy for Post Third Round NPDES Permitting" and the "Post Third Round NPDES Permit Implementation Strategy" on October 1, 1992. The Regional policy and strategy are designed to insure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State/Tribal water quality standard resulting in

nonconformance with the provisions of [40 CFR 122.44(d)]; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

6. Aquatic Toxicity Testing

a. General Comments

Whole effluent toxicity (WET) testing, also known as biomonitoring, is required in permits where the potential exists for the effluent to cause toxicity in the receiving water (30 TAC §307.6(e)(2)(A) and 40 CFR 122.44(d)(1)(v)). The State requires WET testing for domestic wastewater facilities under certain conditions. Those conditions are either a final phase of their permit with a design flow of 1 MGD or greater, an approved pretreatment program with significant industrial users or the potential to cause toxicity in the receiving water. The permittee does not have any of these conditions; therefore WET testing is not required in the draft permit.

7. Permit Limits

See the proposed permit for final limitations.

8. Monitoring Frequency

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [40 CFR 122.48(b)] and to assure compliance with permit limitations [40 CFR 122.44(i)(1)]. The monitoring frequencies are based on best professional judgment (BPJ), taking into account the nature of the facility and the previous permit. Flow shall be measured continuously and reported daily. BOD, pH, DO and TSS be sampled and reported once per week. TRC shall be sampled and reported five times per week by instantaneous grab sample.

XII. 303(d) LIST

Village Creek and Big Sandy Creek, Waterbody Segment Code No. 0608, are not on the "2004 Texas 303(d) List" approved by EPA May 8, 2006. Village Creek does not meet applicable WQS for low pH. The stream has been designated a Category 5b, meaning that a further review of WQS for this waterbody will be conducted before a total maximum daily load (TMDL) is scheduled. Big Sandy Creek does not meet applicable WQS for bacteria. Big Sandy Creek has been assigned a Category 5c, meaning that additional data and information will be collected before a TMDL is scheduled. At this time, TMDLs have not been scheduled, and permit limits have been included for pH and bacteria that meet applicable WQS. No additional permit limits have been proposed based on these listings, and the permit has a reopener clause that would allow the permit to be changed if at a later date the segment had a revised TMDL completed.

XIII. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, http://ifw2es.fws.gov/EndangeredSpecies/lists/, three species in Polk County are listed as endangered or threatened. The red-cockaded woodpecker (*Picoides*

borealis) and the Texas trailing phlox (*Phlox nivalis ssp. texensis*) are listed as endangered. The Bald eagle (*Haliaeetus leucocephalus*) is listed as threatened.

In the previous permit, the red-cockaded woodpecker and the Bald eagle were previously identified. In a letter January 25, 2001, the US Fish & Wildlife Service (FWS) issued a biological assessment (BA) stating that the permit action "is not likely to adversely affect the red-cockaded woodpecker or any other federally listed or proposed species." Since that environmental baseline was established, the American alligator has been delisted as being threatened.

The Texas trailing phlox was not specifically mentioned in the previous permit's statement of basis ESA discussion. The BA written in January 2001 listed the species that it included in its evaluation, and the list was more inclusive of just the three species indicated here. The list included the red-cockaded woodpecker, bald eagle, piping plover, peregrine falcon, Louisiana black bear, American alligator, Houston toad, American burying beetle and the Texas trailing phlox.

Based on those facts, EPA has determined that the reissuance of this permit will have "no effect" on listed threatened and endangered species.

XIV. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should have no impact on historical and/or archeological sites since no construction activities are planned in the reissuance.

XV. CERTIFICATION

EPA will certify the permit after the 30-day public notice period, taking into consideration any comment made during the public notice period. The draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service and to the National Marine Fisheries Service prior to the publication of that notice.

Comment [LG2]: EPA is certifying agency!

XVI. FINAL DETERMINATION

The public notice describes the procedures for the formulation of final determinations.

XVII. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(S)

EPA Application Form 2A received by EPA July 19, 2006.

B. 40 CFR CITATIONS

Sections 122, 124, 125, 133, 136

C. STATE REFERENCES

Texas Surface Water Quality Standards, 30 TAC Sections 307.1 - 307.10 (21 TexReg 9765, August 17, 2000).

"Procedures to Implement the Texas Surface Water Quality Standards," Texas Commission on Environmental Quality, January 2003.

D. MISCELLANEOUS REFERENCES

EPA Region 6 "Policy for Post Third Round NPDES Permitting" and "Post Third Round NPDES Permit Implementation Strategy," October 1, 1992.

National Toxics Rule 57 FR 60848, December 22, 1992.